

## オホーツク海の海氷減少に対する大気応答

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Atmospheric response to sea ice reduction in the Sea of Okhotsk is investigated by conducting two atmospheric general circulation model (AGCM) experiments, whose boundary conditions do not have interannual variability, and differ only in sea ice over the Sea of Okhotsk between the two experiments. In winter, enhanced surface sensible and latent heat fluxes due to the reduction of sea ice moistens and warms surface air just over the Sea of Okhotsk, which results in their suppression just downstream over the western North Pacific. The surface air warming over the Sea of Okhotsk makes sea level pressure lower there. Around late winter, when the prescribed sea ice reduction is the largest, an anticyclonic height response appears over the sea of Okhotsk in the middle and upper troposphere connecting to an anticyclonic anomaly over the Bering Sea in the lowermost atmosphere. A linear baroclinic model experiment reveals that those responses in the AGCM can be considered as linear response to diabatic heating anomaly due to the enhanced sea surface heat fluxes. The observed response is similar to the dominant interannual variability over the western North Pacific both in the AGCM and a reanalysis data set, which suggests that the sea ice reduction triggers atmospheric internal variability there.